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HP Inc.
3390 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528-9544

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yvonne.bailey@hp.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS SAWYERS

Appeal 2016-003309
Application 13/202,032[1]
Technology Center 2100

Before JOSEPH L. DIXON, SCOTT B. HOWARD, and MATTHEW J. McNEILL, *Administrative Patent Judges*.

HOWARD, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Final Rejection of claims 1–6 and 8–19, which constitute all of the claims pending in this application. Claim 7 has been cancelled. Final Act. 2. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] Appellant identifies Hewlett-Packard Development Company, LP ("HPDC") as the real party in interest. HPDC is a wholly-owned affiliate of Hewlett-Packard Company. The general or managing partner of HPDC is HPQ Holdings, LLC. App. Br. 3.

THE INVENTION

The disclosed and claimed invention is directed "to a computer that includes a battery with a fuel gauge that reports voltage and current input to charge the battery while the computer is in an off-state so the computer can calculate input power while the computer is in an on-state." Spec. 1:1–4.

Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A computer, comprising:
>
> a battery including a fuel gauge that reports voltage and current input to charge the battery while the computer is in an off-state;
>
> a current sense resistor to measure a current supplied to the computer from an alternating current (AC) adapter;
>
> an amplifier to read the current measured by the current sense resistor and generate a signal representing the current measured by the current sense resistor; and
>
> a controller to receive the signal generated by the amplifier and information about the voltage and current input to charge the battery from the fuel gauge, wherein the controller is to use the received signal and information to calculate power being input to the computer while the computer is in an on-state, and
>
> wherein the controller is to use correction factors relating to errors in amplifier gain and errors in amplifier offset to correct readings made by the amplifier.

REFERENCES

The prior art relied upon by the Examiner as evidence in rejecting the claims on appeal is:

Sawyers	US 2003/0126474 A1	July 3, 2003
Maireanu	US 2007/0096697 A1	May 3, 2007
Elias	US 2008/0054847 A1	Mar. 6, 2008
Verdun	US 2010/0063755 A1	Mar. 11, 2010

REJECTIONS

Claims 1–6, 8–16, 18, and 19 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Verdun in view of Sawyers and Maireanu. Final Act. 2-5.[2]

Claim 17 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Verdun in view of Sawyers, Maireanu, and Elias. Final Act. 6.

ANALYSIS

We have reviewed the Examiner's rejection in light of Appellant's arguments that the Examiner erred. In reaching this decision, we have considered all evidence presented and all arguments made by Appellant. We disagree with Appellant's arguments with respect to the pending claims, and we incorporate herein and adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken (Final Act. 2–6), and (2) the reasons and rebuttals set forth in the Examiner's Answer in response to Appellant's arguments (Ans. 12–13). We incorporate such findings, reasons, and rebuttals herein by reference unless otherwise noted. However, we highlight and address specific findings and arguments for emphasis as follows.

[2] We note the Final Action incorporates by reference "[t]he teachings of Verdun, Sawyers, and Maireanu from the previous office action," a Non-Final Action mailed December 4, 2014 (hereinafter "Non-Final Act."). Final Act. 2.

Claims 1, 3–6, 8–11, 13–16, 18, and 19

Appellant argues that Examiner erred in finding the cited prior art teaches "wherein the controller is to use correction factors relating to errors in amplifier gain and errors in amplifier offset to correct readings made by the amplifier," as recited in claim 1. App. Br. 8–11; Reply Br. 4–6. Specifically, Appellant argues Verdun "does not include correcting the readings made by an amplifier, let alone correcting the readings made by an amplifier using correction factors relating to errors in amplifier gain and errors in amplifier offset." App. Br. 9. Appellant further argues that although "Maireanu relates to predicting the capacity of a battery," it does not teach or suggest "correcting the reading made by an amplifier." App. Br. 10. Appellant also argues "using 'current correction' and 'battery temperature correction' to predict the remaining capacity of a battery, as discussed in Maireanu, is not the same as using correction factors relating to errors in amplifier gain and offset to correct readings made by the amplifier." *Id.*

The Examiner finds the combination of the teachings of Verdun and Maireanu teach or suggest the wherein limitation recited in claim 1. Final Act. 2–3. The Examiner further finds "[o]ne of ordinary skill in the art would have motivation to include the correction circuitry in Maireanu with the power measurement method of Verdun and Sawyers to correct for error introduced by the circuitry used for charging the battery and measuring the voltage into the computer." Final Act. 4.

Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). The

test for obviousness is not whether the claimed invention is expressly suggested in any one or all of the references, but whether the claimed subject matter would have been obvious to those of ordinary skill in the art in light of the *combined teachings* of those references. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Because Appellant's arguments are directed to the references individually and not the combined teachings of those references as applied by the Examiner, we are not persuaded by Appellant's argument that the Examiner erred.

Accordingly, we sustain the Examiner's rejection of claim 1, along with the rejections of claims 8 and 15, which are argued on the same grounds, and the rejections of claims 3–6, 9–11, 13, 14, 16, 18, and 19, which are not argued separately. *See* App. Br. 11.

Claims 2 and 12

Appellant argues the Examiner erred in finding the cited prior art teaches "a voltage divider to provide to the controller a signal representing a voltage supplied to the computer from the AC adapter," as recited in claims 2 and 12. App. Br. 12; Reply Br. 6–7. More particularly, Appellant argues the Examiner erred in finding Maireanu's Figure 1 teaches a voltage divider because paragraphs 22 and 27 "do[] not mention any voltage divider." App. Br. 12. Appellant also argues one skilled in the art would not consider "a charger to charge a battery" a voltage divider. *Id.* Appellant further argues the Examiner erred in finding charger 110 to "represent a voltage supplied from an AC adaptor." *Id.*

The Examiner finds Maireanu's Figure 1 teaches an AC power source (item 110) and that the circuitry between the amplifier 132 and multiplexer

170 divides the voltage. Non-Final Act. 9; Ans. 13. More particularly, the Examiner finds "[o]ne of ordinary skill in the art recognizes that the computer may be powered either from the charger 110 (AC power) or the battery pack 120 [Fig l]" and that either the charger or battery pack may provide the power for the computer and battery gauge circuit. Ans. 13. The Examiner further finds that "circuitry including the coefficient generators 141–151, effectively divide the voltage from the amplifier 132 before supplying the corrected voltage to the controller 170 [Fig 1]." *Id.*

There is no requirement in an obviousness analysis for the prior art to "contain a description of the subject matter of the appealed claim in *ipsissimis verbis*." *In re May*, 574 F.2d 1082, 1090 (CCPA 1978). Therefore, we are not persuaded by Appellant's argument regarding Maireanu not using the phrase "voltage divider." The Examiner finds circuitry shown in Maireanu's Figure 1 divides the voltage and Appellant has not persuasively argued the Examiner erred.

We also agree with the Examiner that Maireanu teaches the claimed AC adaptor. Maireanu's Figure 1 shows a charger 110, which a person of ordinary skill in the art would understand to be an AC adapter. *See In re Preda*, 401 F.2d 825, 826 (CCPA 1968) (holding "it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom"); *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (holding that prior art references must be "considered together with the knowledge of one of ordinary skill in the pertinent art"). Accordingly, we are not persuaded by Appellant's argument that the Examiner erred.

In the Reply Brief, Appellant states that "the Examiner asserts that the 'the coefficient generators 141–151 effectively divide the voltage from the amplifier 132'" and that, therefore, the Examiner is equating "the coefficient generators 141–151 of Maireanu to the 'voltage divider' recited in claim 2." Reply Br. 7. Appellant relies on that understanding of the Examiner's finding in arguing the Examiner erred. *Id.*

We are not persuaded by Appellant's argument that the Examiner erred. Appellant's Reply Brief crops the Examiner's finding. Specifically, the Examiner finds as follows: "*However, the circuitry including* the coefficient generators 141 - 151, effectively divide the voltage from the amplifier 132 *before supplying the corrected voltage to the controller 170 [Fig 1].*" Ans. 13 (cropped language emphasized). As the cropped language makes clear, the Examiner is not relying on the coefficient generators alone, but the entire circuit between amplifier 132 and the controller 170.

Finally, Appellant also argues in the Reply Brief that the multiplexer 170, which ultimately receives the signal, cannot be the claimed "controller" because it simply multiplexes. Reply Br. 6–7. Appellant's Opening Brief argues the same limitation, but focuses on the voltage divider, not the controller that receives the divided voltage. Because Appellant did not raise that argument in his opening brief and good cause has not been shown why it should be considered, we will not consider this argument. 37 C.F.R. §41.41(b)(2); *Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010) (Informative) ("[T]he reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner's rejections, but were not.").

Accordingly, we sustain the Examiner's rejection of claim 2, along with the rejection of claim 12, which is argued on the same grounds. *See* App. Br. 12.

Claim 17

With respect to dependent claim 17, Appellant merely contends that because the additional reference used in the rejection of that claim (Elias) does not cure the shortcomings of the other references applied against claim 15, the Examiner failed to make a prima facie case of obviousness for these claims. App. Br. 13. Because we determine that the rejection of claim 15 is not erroneous for the reasons discussed above, we sustain the rejections of these claims.

DECISION

For the above reasons, we affirm the Examiner's decisions rejecting claims 1–6 and 8–19.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED